

# Thursday mornings MRes project progress report

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Date Time: 21-May-2020 09:00

Location: MS Teams

People: James, Samraat, Emma, PokMan

## 1 Topics discussed

1. R vs Julia-py3 using same equation settings
2. R initial carbon density scanning

## 2 Consensus

1. Do the same scan using Julia-py3 to confirm numerical stability (pie charts)
2. if `scipy.integrate.odeint` not having numerical stability, try other solvers (default: LSODA; alt: LSODE, LSODES)
3. do a stability test in Julia-py3 numerical solution using analytical solution as initial values
4. (James) do very small initial values practically meaningful?
  - ecosystem stochasticity may take over
  - microbial cells are easy to obtain